

PAVING GRADE BITUMENS

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Product Name: PAVING GRADE BITUMEN

1. Substance and Company Identification

1.1 Product identifier

Trade Name: **Paving grade bitumen (50 / 70; 70 / 100; 160 / 220)**
Name according to 67/548/EEC: ES 232-490-9 Asphalt; Asphalt
ES 265-196-4 Oxidized asphalt; Asphalt
Other Names: Road bitumen, Asphaltic bitumen
Marketing authorisation number: ES 232-490-9 **01-2119480172-44-0041**
ES 265-196-4 **01-2119498270-36-0025**

1.2 Relevant identified uses of the substance and uses advised against

Paving grade bitumen is designed for preparation of coating mixtures, cast asphalt, for construction and maintenance of asphalt roads, pavements, for manufacturing of asphalt concrete, etc. It shall not be used for any other purposes not specified in the relevant operational documentation.

1.3 Details of the Supplier of the Material Safety Data Sheet

1.3.1 Business Name and Identification No.

ČESKÁ RAFINÉRSKÁ, a.s.	Company ID: 62741772
Záluží 2	Tax ID: CZ62741772
Litvínov	www.ceskarafinerska.cz
Post Code 436 70	E-mail: info@crc.c

1.3.2 Place of Business

Litvínov Refinery	Kralupy Refinery
P. O. BOX 47	P. O. BOX 96
436 01 Litvínov	278 01 <u>Kralupy n/Vlt.</u>
Phone: +420 476 163 567	+420 315 718 500
Fax: +420 476 165 086	+420 315 718 640
www.crc.cz	info@crc.cz

1.3.3 Person in Charge of the Material Safety Data Sheet

Ing. Václav Pražák	tel.:	+420 476 164 308
	E-mail:	vaclav.prazak@crc.cz

1.4 Emergency Phone Number

1.4.1 TRINS (Transport Information and Emergency System)

It provides around-the-clock expert as well as practical assistance in handling emergency situations in connection with the transport and storage of hazardous chemical substances in the territory of the Czech Republic. The assistance is provided via fire brigade operational centres or via UNIPETROL RPA, s.r.o. Litvínov - the regional centre number 1 + the national coordination centre TRINS.

TRINS Contact: Mgr. Jaroslav Porteš; phone: +420 476 165 253, E-mail: jaroslav.portes@unipetrol.cz

1.4.2 Toxicological Information Centre

Address: Na Bojišti 1, 120 00 Prague 2
Telephone: +420 224 919 293, +420 224 915 402

Information on Health Risks Only - Acute poisoning of people and animals.

2. Hazard Identification

2.1 Substance Classification

2.1.1 According to Regulation (EC) No. 1272/2008

According to the above Regulation, paving grade bitumen is not classified as a hazardous chemical substance.

2.1.2 According to Council Directive 67/548/EEC

According to the above Directive, paving grade bitumen is not classified as a hazardous chemical substance.

2.2 Label Elements

2.2.1 According to Regulation (EC) No. 1272/2008

None

2.2.2 According to Council Directive 67/548/EEC

None

2.3 Other Hazards

2.3.1 PBT Information

According to the criteria in the Annex XIII to the Regulation no. 1907/2006, paving grade bitumen does not contain PBT or vPvB substances.

2.3.2 Other Hazardous Impacts

Hot paving grade bitumen is strongly adherent to skin and cause hard to heal burns. Paving grade bitumen may cause skin allergies, with symptoms such as skin sensitivity and skin burns from sun (so-called striate dermatitis).

3. Composition / Information on Ingredients

3.1 Preparation Composition, Concentration Limits and Ingredients Classification

The product contains the following hazardous substances:

<i>Substance (name)</i>	<i>Content (% V/V)</i>	<i>Number CAS</i>	<i>Number ES.</i>	<i>Registration number</i>
Asphalt; Asphalt	0 to 100	8052-42-4	232-490-9	01-2119480172-44-0041
Oxidized asphalt; asphalt	0 to 100	64742-93-4	265-196-4	01-2119498270-36-0025

3.2 Chemical Specification

Paving grade bitumen is a dispersion mixture of high molecular paraffin, asphaltenes, maltenes, resins, heterocyclic compounds, mineral substances, etc. At normal temperatures paving grade bitumen is semi-solid to solid homogenous bituminous compound of black colour. In molten state, paving grade bitumen is heavy bodied fluids. They are extracted as a distillation residue from the vacuum distillation of petroleum. They are further processed by air oxidation to achieve requested characteristics.

4 First aid instructions

4.1 General instructions

When handling the product, it is necessary to observe all the requirements related to health and safety at work in compliance with the applicable legislation and this Material Safety Data Sheet.

In the case of risk of unconsciousness, transport in the recovery position.

4.2 Inhalation Hazards

Remove to fresh air, provide rest, prevent from walking. If breathing has stopped, apply mouth-to-mouth resuscitation. Seek medical attention promptly.

4.3 Contact with skin

Paving grade bitumen has adverse effect on skin. The First Aid in case of being sprayed by hot asphalt is to provide sterile treatment of the affected areas and seek medical advise. Hot asphalt stuck to skin shall be cooled down at first (by water). Asphalt should be removed from skin only if small areas of body are affected. Petroleum jelly or petroleum jelly oil can be used to remove asphalt. Animal greases are not suitable. Always seek medical treatment.

4.4 Contact with Eye

In case of contact of hot asphalt with eyes seek medical attention promptly.

4.5 Ingestion

If swallowed, seek immediate medical help.

5 Fire Fighting Measures

5.1 Suitable Extinguishing Media

Foam, powder, carbon dioxide.

5.2 Unsuitable extinguishing media

Water (only suitable for cooling).

5.3 Special Hazards

Flammable substance. It burns with a sooty flame in air. Carbon monoxide may be released.

5.4 Special Protective Equipment for Fire Fighters

Fire-resistant clothing, self-contained breathing apparatus.

6 Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Prevent contamination of clothes and shoes, prevent skin and eye contact. At all workplaces implement measures preventing from occurrence of striate dermatitis and burns. In places where these measures cannot be implemented, use personal protective equipment, mainly skin and eyes protective equipment (safety gloves, safety goggles or guard, apron, shoes and clothes). Evacuate all persons who are not participating in salvage operations.

6.2 Environmental Precautions

Prevent further leakage. Guard the area. Do not drain into sewers.

6.3 Methods and Material for Containment and Cleaning Up

Depending on the situation, let molten asphalt to set, mechanically clean and dispose of it in compliance with the applicable waste legislation.

6.4 Reference to Other Sections

See sections 8 and 13

7 Handling and Storage

7.1 Measures for Safe Handling

When handling hazardous chemical substances and chemical preparations, everybody is obliged to protect human health and the environment and observe the warning symbols of hazards, standard phrases marking the degree of risk and standard instructions for safe handling.

7.2 Conditions for Safe Storing of Substances and Mixtures, including Incompatible Substances and Mixtures

Keep in a well-ventilated area away from ignition sources. Electrical equipment must conform to the respective regulations. Protect from electrostatic charges. Do not smoke.

7.3 Specific Final Use

Paving grade bitumen is designed for preparation of coating mixtures, cast asphalt, for construction and maintenance of asphalt roads, pavements, for manufacturing of asphalt concrete, etc. It shall not be used for any other than approved purposes. Never drain into sewers.

8 Exposure Controls / Personal Protection

8.1 Exposure Limits

8.1.1 According to Government Resolution no. 361/2007 Coll.

N/A.

Due to potential degradation at higher temperatures, the adherence to the bellow limits is recommended.

		Total hydrocarbons
PEL	mg/m ³	5
NPK-P	mg/m ³	10

8.1.2 DNEL according to CSR

N/A.

8.2 Exposure Controls

General safety and sanitary precautions: never eat, drink or smoke when working with asphalts. Before meals and drinks and after work wash the skin with warm water and soap and apply a suitable moisturizing cream.

8.2.1 Employee Exposure Controls

Respiratory protection:	---
Eye protection:	Chemical type goggles.
Hand protection:	Safety gloves.
Skin protection:	Protective clothing

8.2.2 Environmental Exposure Controls

See also Clauses 2.1, 6.2 and 16.3.

9 Physical and Chemical Properties

9.1 Basic Physical and Chemical Properties

<i>Physical state (at 20°C):</i>	semi-solid to solid
<i>Colour:</i>	black
<i>Odour:</i>	characteristic asphalt odour (mainly when heated up)
<i>Density at 15 °C:</i>	> 1000 kg/m ³
<i>Solubility in water:</i>	insoluble
<i>Vapour pressure at 20°C:</i>	< 0.01 kPa
<i>Flash point:</i>	> 220°C
<i>Kinematic viscosity at 135°C</i>	100 to 300 mm ² /s
<i>Maximum experimental safety gap</i>	---

9.2 Additional information

<i>Softening point:</i>	approx. 30 to 60 °C
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10 Stability and Reactivity

10.1 Reactivity

The product is stable at normal use conditions.

10.2 Chemical stability

The product is stable at normal use conditions.

10.3 Possibility of Hazardous Chemical Reactions

None under normal conditions; incomplete burning can produce carbon monoxide and soot.

10.4 Conditions to Avoid

Presence of ignition sources, contact with naked flames.

10.5 Incompatible Materials

Oxidizing agents.

10.6 Hazardous Decomposition Products

Under normal conditions is stable. Heating to high temperatures (above 200 °C) can cause thermal cracking and release of gaseous hydrocarbons.

11 Toxicological Information

11.1 Acute toxicity

N/A.

11.2 Skin Causticity / Irritation

N/A.

11.3 Serious Damage / Irritation to Eyes

N/A.

11.4 Respiratory / Skin Sensitisation

N/A.

11.5 Mutagenic Impacts in Elementary Cells

N/A.

11.6 Carcinogenicity:

N/A.

11.7 Reproductive Toxicity

N/A.

11.8 STOT - Single Exposure

Unknown.

11.9 STOT - Repeated Exposure

N/A.

11.10 Inhalation Hazards

N/A.

12 Ecological Information

12.1 Toxicity

N/A.

12.2 Persistency and Degradability

N/A.

12.3 Bio-Accumulative Potential

N/A.

12.4 Mobility in Soil:

N/A.

12.5 PBT Assessment Results

Does not contain substances indicating compliance with the criteria for PBT or vPvB substances.

12.6 Other Adverse Effects

N/A.

13 Disposal Considerations

13.1 Legal Regulations on Wastes

In accordance with the Act No. 185/2001 Coll., on wastes, as amended, including related regulations and provisions, the product is classified as follows:

Waste type code according to the inventory: **05 01 17**
Waste category: **O**

13.2 Substance Disposal

Wastes and unused residues are disposed of in compliance with the applicable legislation on wastes, usually by controlled dumping, incineration or recycling.

13.3 Contaminated Container Disposal

Paving grade bitumen is usually supplied in road and railway tank cars. Decontamination and disposal of these containers follows the applicable ADR/RID regulations.

14 Transportation

If transported using railway tank cars, the product is classified as follows.

Nomenclature and labelling in accordance with the European Agreement on Dangerous Goods RID/ADR as amended:

HEATED	Hazard ID No.:	99	Classification code:	M9
LIQUID, J.N.	UN no.:	3257	Class:	9
			Packing Group:	III



15 Regulatory Information

15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture

- Act No. 258/2000 Coll., on public health protection, as amended, including the related regulations and provisions
- Act No. 262/2006 Coll., the Labour Code, as amended, including the related regulations and provisions
- Government Regulation No. 361/2007 Coll., on Occupational Safety, as amended, including the related regulations and provisions

15.2 Chemical Safety Assessment

Has been performed.

15.3 Other Regulatory Information

15.3.1 Act No. 86/2002 Coll., on air conservation

The product is not a volatile organic compound in accordance with Act No. 86/2002 Coll., on air conservation, as amended, including the related regulations and provisions.

15.3.2 ČSN 65 0201 Flammable Liquids – Plants and Storage Facilities

The product is not a flammable liquid.

16 Other Information Applying to the Dangerous Chemical Substance or Preparation

16.1 Information on Changes

All changes in this safety data sheet were made in accordance with the new data on substance hazardoussness gained during its registration process and in accordance with the requirements of the regulation no. 1907/2006/EC and the regulation no. 1272/2008.

16.2 Used literature

- Regulation (EC) No. 1907/2006 of the European Parliament and the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), as amended, including related rules and regulations
- Regulation of the European Parliament and of the Council (EC) no. 1272/2008 dated 16 December 2008 on classification, labelling and packaging of substances and mixture, as amended, including related rules and regulations
- Act No. 86/2002 Coll., on air conservation, as amended, including the related regulations and provisions
- Act No. 111/1994 Coll., on road transport, as amended, including the related regulations and provisions (ADR)
- Act No. 185/2001 Coll., on wastes, as amended, including the related regulations and provisions
- Act No. 254/2001 Coll., Water Act, as amended, including the related regulations and provisions
- Act No. 258/2000 Coll., on public health protection, as amended, including the related regulations and provisions
- Act No. 262/2006 Coll., the Labour Code, as amended, including the related regulations and provisions
- Act No. 266/1994 Coll., on railways, as amended, including the related regulations and provisions (RID)
- Act No. 356/2003 Coll., on chemical substances and chemical preparations, as amended, including the related regulations and provisions
- Government Regulation No. 361/2007 Coll., on Occupational Safety, as amended, including the related regulations and provisions
- ČSN EN 12591 Asphalts and asphalt cements – Specifications for Paving grade bitumen

16.3 List of Used R-Phrases and H-Phrases, S-Phrases and P-Phrases

16.3.1 Standards Phrases for Specific Degree of Risk (R-Phrases)

None

16.3.2 Hazard phrases (H-phrases):

None

16.3.3 Standard Instructions for Safe Handling (S-Phrases)

None

16.3.4 Instructions for Safe Handling (P-phrases):

None

16.4 Training Instructions

Trainings are carried out in accordance with the requirements of the Labour Code and Act No. 258/2000 Coll.

16.5 Other Information

The information contained in this Material Safety Data Sheet applies to the specified product only and is based on our current knowledge and experience and need not be comprehensive. The user is responsible for the proper handling of the product in accordance with the applicable legislation.